

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number  
**WO 2004/110520 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 9/14**

Richard [US/US]; 2891 Alton Drive, St. Pete BEACH, FL 33706 (US).

(21) International Application Number:  
PCT/US2004/018707

(74) Agents: **KREBS, Robert, E.** et al.; Thelen Reid & Priest LLP, P.O. Box 640640, San Jose, CA 95164-0640 (US).

(22) International Filing Date: 14 June 2004 (14.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/478,307 12 June 2003 (12.06.2003) US

(71) Applicant (for all designated States except US): **SUB-Q, INC.** [US/US]; 1062-D Calle Negocio, San Clemente, CA 92673 (US).

(72) Inventors; and

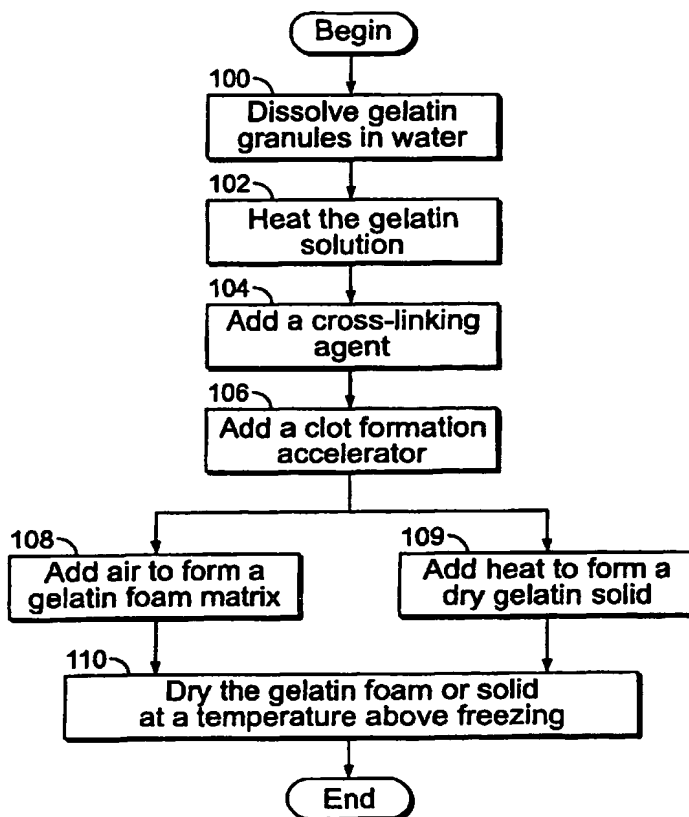
(75) Inventors/Applicants (for US only): **SING, Eduardo**, Chi [MX/US]; 5 Terraza Del Mar, Dana Point, CA 92629 (US). **ASHBY, Mark** [US/US]; 23962 Frigate Drive, Laguna Niguel, Ca 92677 (US). **TRAN, Tin** [US/US]; 2856 East Alden Place, Anaheim, CA 92806 (US). **GREFF,**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(54) Title: IMPROVED SYSTEM AND METHOD FOR FACILITATING HEMOSTATIS WITH AN ABSORBABLE SPONGE



(57) Abstract: The present invention provides for a method and apparatus to provide hemostasis at a blood vessel puncture site, having a hemostasis material and a clot formation accelerator (106), wherein said clot formation accelerator is substantially dispersed throughout said hemostasis material.



FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:  
6 May 2005

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/18707

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 9/14

US CL : 424/489

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/489, 422, 423, 484, 492, 493; 606/232, 213, 215

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,894,022 A (JI et al) 13 April 1999 (13.04.1999), See column 2, lines 38-42 and 58-67; column 5, lines 53-67; Column 7, lines 15-16.	1-18, 24-27
Y		19-23, 28-32
X	US 5,773,033 A (COCHRUM et al.) 30 June 1998 (30.06.1998), See fig. 1, column 17 lines 9-28, column 3, lines 50-56.	1, 7, and 11
A	US 20020176893 A1 (WIRONEN et al.) 28 November 2002 (28.11.2002), See whole document.	1-14



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		*T	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

04 February 2005 (04.02.2005)

Date of mailing of the international search report

03 MAR 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Bradford C Panflick

Telephone No. (703) 308-0858